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JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

I was listening to Home Show Garden Pros radio show (610 AM) the other day and there was a call about getting rid of slugs and snails. The show's host Danny Milliken correctly suggested using a product called Sluggo. This is a natural product composed of iron phosphate (FePO_4) and is harmless when used only occasionally. I have used it myself on many occasions over the years.

Some problems may occur if it is used too often. The first is it will release phosphorous (P) into the soil like many fertilizers. When there is too much phosphorous in the soil the beneficial mycorrhizal fungi will not colonize a plant's roots and protect them from disease, help collect water and other nutrients etc. Hence, we lose this powerful benefit that fungi provide towards having a healthy garden.

The next issue occurs as too much of any element in the soil can cause other elements to become locked up and unavailable to plants which create nutritional deficiencies that weaken plants and make them more susceptible to insects and disease.

Since iron phosphate is pretty harmless, researchers at Ohio State University started wondering how it killed slugs and snails after receiving numerous reports of it killing dogs when ingested. They found that wheat gluten is added to these baits to attract the pests (or other animals like dogs) but this will not kill the snails or animals, so the question was raised how does this work?



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They found a man-made chemical called EDTA (or sometimes EDDS) was added to these type baits to make the iron release in its elemental form (Fe^{+3}), which will be absorbed by anything that eats it, where it causes iron poisoning.

While not a high risk of danger, only use occasionally and keep pets out of the area where it is applied for safety. Also scatter it lightly over the area where it would be difficult for pets to lick up as compared to putting it in clumps.

All this brought to mind my favorite method of snail and slug control that we reported years ago in the newsletter. Hence it is time to re-post it.

The most effective (and lowest cost) slug and snail control I have ever used is baby ducks. For many years every other spring when my children were young, I would go to Wabash Antiques and Feed, now at 4537 N. Shepherd (formerly on Washington Ave.), and buy a couple baby ducks and keep them in my backyard. They love to eat slugs and snails and will almost fight over who gets to eat them. They will stick their beaks into every nook and crevice looking for them. The ducks then leave a nutrient-rich duck poop behind to fertilize the plants.

When they were old enough, they would just fly off over the fence and be gone. However, they knocked back the slug and snail populations so much that they were no longer a problem, often giving me two years of control! As a side benefit, they also eat lots of other pest insects, mulberries that dropped from my tree, some weeds, etc. turning them all into rich poop.

I learned later that the digestive system of ducks breaks down the snail shell back into water soluble calcium and magnesium which is in a form that microbes and plants can quickly absorb.



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God knew what he was doing by providing a natural pest control that enriches the soil in the process. A modern gardener studies nature and copies how pest control is done. It works better, costs less, and has no toxic side effects. In other words what has become known as "Organic Methods".

I have another garden friend that I have watched eat slugs and that is the toad frog (they also eat many other garden pests and love roaches). I have seen them eat slugs but never a snail. To ensure one has a good amount of hungry toad frogs around to eat slugs and pests they need two things as do all life forms: water and shelter. Water is easy as I have a pond in my yard, and I place old pottery watering dishes (saucers) under shrubs and other shady places in several locations. I like the pottery dishes as they are porous and will drain/dry out in a few days (glazed pots do not work well). This prevents mosquito larva from hatching as the water does not last long enough for them to hatch. I refill the saucers when I am watering my hanging baskets and plants in containers or by rainfall. Toads do not need a lot of water, but I occasionally see them sitting in the saucer of water "taking a bath"?

To create shelter, I build toad houses. There are many ways to do this. I use a broken pottery watering saucer that are at least 1.5 inches deep, I make sure there is a hole in the side (lip) that the toads can use to get in and out. I turn the saucers upside down and cover with a few inches of soil or mulch and only leave the entrance hole barely open. A saucer 12-15 inches wide might house 6-10 large toads.

At my business we often get tree limbs and trunks with hollows in them that have been cut into pieces that are easy to handle. I will get a 6-10-inch diameter log piece that has been cut 18-24 inches long. I will partially bury it and will cover it with soil or mulch as before leaving only one end open but partial covered so that there is only a small entrance. Depending on the size of the hollow area it will hold many toad frogs. The log will eventually rot after a few years, but the toads seem to love it. I suspect it hold moisture better and is cooler.



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Another benefit of the logs is that they give the garden a more natural feel and look as one might have in the forest. Several studies have found that having logs rotting in one's garden is related to less insect and disease problems.